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ABSTRACT

The personality correlates of timing of puberty were investigated in this study. Estimates of total body water/body weight (TBW/BW) ratios obtained from the height and weight measurements of 85 sixth-grade girls were the primary measure of pubertal timing. Information on breast development and menarche was also obtained. Measures included scales from the California Personality Inventory (CPI) on five aspects of personality: femininity, dominance, good impression, communality, and flexibility. Measures of masculine and feminine instrumentality and expressivity were the M and F scales of Spence and Helmreich. Additional measures related to sex role were Spence and Helmreich's bipolar M-F scale and ratings on a five-point scale recording whether the girls had ever wanted to be boys. Findings indicate that TBW/BW was related to the CPI femininity scale. Thus, early maturers were more feminine. Because the 38-item femininity scale is a heterogeneous one, the relationship between it and TBW/BW was explored further by correlating TBW/BW with scores on individual items. Four of the 38 relationships were significant. Girls maturing early were more likely than girls maturing later to like the work of a librarian or department store clerk, to prefer reading romances to adventures, and to be irritated at the sight of someone spitting on the sidewalk. TBW/BW ratios were also found to be significantly related to the CPI flexibility scale. (RH)

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Pubertal Timing and Personality in Early Adolescent Girls

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Abstract

This study examined the personality correlates of timing of puberty in early adolescent girls. Body water/body weight ratios obtained from the height and weight of 85 sixth-grade girls were the primary measure of pubertal timing; information on breast development and menarche was also obtained. Personality measures included five measures of sex-typed personality and interests (3 from Spence & Helmreich's PAQ, the CPI Femininity scale, and ratings of wanting to be a boy), and 4 additional CPI scales. Being an earlier maturer was associated: (1) with CPI Femininity, a traditional bipolar M-F scale; (2) with higher scores on CPI Flexibility.

Pubertal Timing and Personality in Early Adolescent Girls

Timing of puberty is a biological variable, under a substantial degree of genetic control (Garn, 1980). It shows wide individual variation as well as a substantial sex difference (Tanner, 1962). These facts, combined with the psychological and social importance of sexual and physical maturation, have led many investigators to be concerned with the impact of pubertal timing on a variety of social and cognitive variables.

Initial knowledge of the personality correlates of early and late maturing came from a series of papers by Mussen, M.C. Jones, and co-workers. They found that early maturing males were rated more attractive and socially poised (Jones & Bayley, 1950) than late maturers. Early maturers also showed less dependency and more aggression on TATs at 17 (Mussen & Jones, 1957). Differences between the groups were found to persist into adulthood in studies employing the California Personality Inventory (CPI); early maturers were higher in traits such as Dominance.

Studies of pubertal timing in girls during this period produced more mixed results. H.E. Jones (1949) suggested that early maturing females, like late maturing males, might suffer socially from being quite different from their peer groups. Faust (1960) found some support for this in sixth-grade girls, but found that, in later grades, early maturing seemed to be a social advantage. Jones and Mussen (1958) found TATs at 17 to show less romantic interest and more motivation for recognition and achievement in later maturing girls. Weatherly (1964) tended to confirm this picture, although some of his cell sizes were quite small.

Other studies had previously suggested that earlier maturing girls might have more "appropriate" feminine interests that late maturers, for example, in

personal adornment (More, 1953; Stone & Barker, 1939).

Following this body of work came a hiatus in interest in the question of the impact of puberty and pubertal timing. This has recently changed quite dramatically. Current work on the psychosocial correlates of entry into puberty for males includes Steinberg and Hill's (1978) finding that family conflict in a taped discussion session increases when boys show rapid pubertal growth, and Steinberg's (1981) longitudinal study showing an increase and subsidence of conflict between adolescent and mother as puberty progresses, combined with increased deference of son to father. For females, Ruble, Brooks-Gunn and Clarke (1980) have investigated attitudes to menstruation and menarche, Goldberg and Kriger (Note 1) and Frodi, Murrary, Lamb and Steinberg (Note 2) have looked at attitudes and behavior to babies in girls before and after menarche, and Koff, Rierdan and Silverstone (1978) have demonstrated changes in body image related to menarche. In the area of timing of puberty (as opposed to entry into puberty whenever that occurs), there is evidence that later maturing girls are more active and competitive in sports than early maturers (Friedrich-Cofer, Note 3; Malina, Note 4). The idea that early maturers date earlier has received mixed support (Dornsbusch, Carlsmith, Gross, Martin, Jennings, Rosenberg, & Duke, 1981; Simmons, Blyth, Bulcroft & McKinney, Note 5).

Much of the knowledge on correlates of pubertal timing in girls suggests that earlier maturers might, in general, be more "feminine" than late maturers. This conclusion can be gleaned from both older and more recent studies. None of the studies, however, has used direct measures of masculine and feminine personality traits. Kavrell and Jarcho (Note 6) attempted this, using the Bem Sex Role Inventory as their measure of masculinity and femininity. They found neither scale to be related to pubertal timing in adolescent girls.

The present study aimed to pursue the question of the correlation of

pubertal timing and sex-typed personality triats using a wider battery of measures of masculinity and femininity than used by Kavrell and Jarcho. In addition, we investigated whether timing of puberty differences shown to exist in male adults on personality dimensions measured by the CPI (Jones, 1957) had counterparts in adolescent girls.

Timing of puberty was measured in a sample of 85 sixth-grade girls by estimating total body-water/body weight ratios (TBW/BW) from height and weight (Frisch, 1974). This measure was validated by significant relationships to whether or not girs had reached menarche (only 7 had), and to a dichotomous measure of breast development. Personality measures included five scales from the CPI: Femininity (a bipolar masculinity-femininity scale including both interests and personality traits), Dominance, Good Impression, Communality, and Flexibility. Measures of masculine and feminine instrumentality and expressivity were the M and F scales of Spence and Helmreich (1978). Additional measures related to sex role were Spence and Helmreich's bipolar M-F scale and ratings on a 5-point scale of whether the girls had ever wanted to be an individual of the opposite sex.

TBW/BW was not found to be related to either masculine instrumentality or femine expressivity as measured by the Spence and Helmreich scales. This is similar to the data of Kavrell and Jarcho (1980), using the BSRI. Nor was TBW/BW related to Spence and Helmreich's bipolar index of sex-related personality traits, or to ratings of wanting to be a boy. However, TBW/BW was related to the CPI Femininity scale ($r = -.26$, $p < .05$). Thus, early maturers were more feminine. This relationship remained significant ($r = -.22$, $p < .05$) when data were excluded from two girls who responded to less than 20% of the items, and from the seven girls who had begun to menstruate. Thus, the relationship is evident in a purely premenarcheal sample.

The CPI Femininity scale is a traditional bipolar measure of masculinity-femininity, including 38 items dealing with a wide variety of content, including occupational goals, hobbies and interests, and personality traits of aggressiveness, extroversion, anxiety and honesty. Factor analysis by Bohannon and Mills (1978) of the responses of male and female university students identified four factors in the scale, while Mills (1981) found five factors in analysis of responses of seventh- and eighth-grade males and females.

Because the Femininity scale is a heterogeneous one, the relationship between it and TBW/BW was explored further, by correlating TBW/BW with scores on individual items. Four of 38 relationships were significant. Earlier maturers were more likely than later maturers to like the work of a librarian, like the work of a department store clerk, prefer reading romances to adventures, and to be irritated at the sight of someone spitting on the sidewalk.

With regard to personality dimensions other than those associated with sex role, TBW/BW ratios were found to be significantly related to CPI Flexibility ($r = -.22$, $p < .05$). Early maturing was associated with higher scores. This relationship remained significant when data were excluded from eight girls who omitted more than 20% of the items ($r = -.28$) and when the seven girls who had begun to menstruate were also omitted ($r = -.23$). While Jones (1957) found the opposite relationship, with late maturers among adult males higher on flexibility, the present correlation makes sense in terms of the fact that Flexibility can be considered an index of characteristics such as rebelliousness, adventurousness and sarcasm (Gough, 1975). Steinberg and Hill (1978) and Steinberg (1981) found that entry into puberty for males was associated with greater independence in interactions with parents, especially with mothers. Thus, our early-maturing girls may simply have entered such a stage of adolescent rebelliousness.

This study suggests that previous conflicting data regarding the sex-role correlates of timing of puberty are probably due to the multidimensional character of sex-role and sex-typed personality trait. More careful specification will be needed of the traits and interests which are and are not associated with variations in timing of puberty. For early adolescent girls, it is apparently not so much traits of instrumentality or expressiveness which vary, but more concrete occupational interests as well as, perhaps, heterosexual interest (reading romances).

Previous findings that timing of puberty has implications for personality are apparently not limited to older historical periods, but continue to be evident in today's society. It is interesting that the correlations, although small in size, appear already in early adolescence, and before menarche. At older ages and after menarche, they may, of course, change in size or even direction. We have some way to go in charting the impact of puberty and pubertal timing on females and males—but it does seem there are phenomena there to be charted.

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